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Re-imagining school through young people's drawings

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Abstract

Children's drawings provide rich qualitative data (Walker, 2008) and "valuable information for the assessment of children's environmental perceptions" (Barraza, 1999, p. 49). They are the primary data source being used to re-imagine school from a student perspective (Schratz & Steiner-Löffler, 1998) in a research project being carried out with primary school students in Queensland, Australia.

This paper will report on the progress of this project which addresses a mostly unmet need for students' perspectives to be included in school design (Rudduck & Flutter, 2004). Grade 5/6 students in a number of primary schools have been invited to submit annotated drawings with up to 200 words of text illustrating their ideal educational spaces. Using purpose-designed analytical tools, the submissions will be compared across student backgrounds and school types to obtain a better understanding of the needs and educational desires of young people in relation to changing learning environments. The findings will inform consideration of the design and use of educational spaces with all work exhibited through a dedicated website.

The term 'educational spaces' avoids restrictive notions of what the concept of 'school' means, referring to any real or virtual space in which teaching and learning may occur or, as Ferguson and Seddon (2007) have referred to it, "the shifting imagery of education" that includes red brick schools and dispersed learning networks.

The theoretical framework for this study is grounded in the work of Greene (1995) and Wright-Mills (2001) who cited the deployment of critical and empathic imagination in addressing education reform.

Re-imagining school through young people's drawings

'Imagine a School....'

In *'The Future of Education'*, Kieran Egan (2008) offers a concept of schooling in the mid-21st century that is based on creativity and imagination, with its principles echoed in the "exuberance and architectural wit" (p. 129) of the school buildings. School planners who wish to take up the challenge of Egan's imaginative education can look to today's young students for inspiration in creating the educational environments that can lead to creatively engaging pedagogy.

'Imagine a School....' is a pilot project being conducted in a number of primary schools across Queensland, Australia, to address a mostly unmet need for students' perspectives to be included in school design (Rudduck & Flutter, 2004). It is anticipated that it will lead into a longer-term project across four States and three levels of education. This paper reports on the progress of the pilot project that commenced in May, 2009. The principal aim of the project is to elicit the perspectives of young people relating to learning environments to inform pedagogy and school design. The project will compare the views of children across school types (urban/rural, large/small, high and low socio-economic status, etc.) relating to their ideal learning environments.

Background to the project

Research has established a close relationship between learning environments and learning outcomes (Department of Education and Early Childhood Development, Victoria, 2008; Woolner, Hall, Higgins, McCaughey & Wall, 2007) yet, too often, students are passive recipients of education in adult-centred environments. Little is known about how students in Australian schools imagine the ways that the environments in which they exist for six or more hours each weekday, forty weeks a year for around 12 years, could be improved to enhance their engagement with the processes and content of education.

Current designers give attention to operational matters of efficiency and economy, so that architecture for children's education is largely conceived in terms of adult and professional needs (Halpin, 2007). This results in the construction of educational spaces that impose traditional teaching and learning methods, reducing the possibilities of imaginative pedagogical relationships. Education authorities may encourage new, student-centred pedagogical styles, such as collaborative learning, team-teaching and peer tutoring, but the spaces where such innovations are occurring do not always provide the features necessary to implement these styles.

While the voices of the end users (i.e., teachers and students) are increasingly being promoted as essential to planning processes in school-design (Woolner, Hall, Wall & Dennison, 2007), children are rarely consulted on the issue of school design. In those parts of the world, however, where children have been invited to contribute to school planning and in a number of projects with young students, they have provided school designers with innovative ideas. For example, Sack-Min (2008) reports on a US school design competition led by architects to encourage student input into schools design, believing students and teachers should have a greater voice in school design; French and Hill (2004) worked with children's drawings in

Kansas City to identify aspects of school design to inspire creative planning and to ignite innovative ideas; and in Melbourne, Australia, children were invited to work with a school designer to refashion a major part of a primary school building (Mary Featherston Design, 2006).

Elsewhere, however, education authorities are collaborating with global corporations as they plan the educational future of children. For example, the West Philadelphia "School of the Future" demonstrates the incursion of the corporate world into school design, with plans of the Microsoft Corporation to export their model worldwide (School District of Philadelphia, 2004).

Children's perspectives may be contradictory to the conditions that adults see as 'desirable'. One of the characteristics that school designers in the UK have found when consulting with students is that their perspectives are often unpredictable (Burke & Grosvenor, 2003; Rudduck & Flutter, 2004) but students as young as first grade involved in school design have been able to contribute "ideas that teachers would not have thought of" (Ruddock & Flutter 2004, p. 21) and that enhance students' ownership of the school and engagement in the learning process. Children's perspectives have included innovative design solutions to social problems and sites of 'disease' (Burke & Grosvenor, 2003) with their insights able to assist educators and planners to see things that are important to students but that adults generally overlook (Rudduck & Flutter, 2004).

Approach and methodology

Through engaging visually with students' voices, the methodology that is central to this research enables young students to contribute to dialogues around school planning to better inform the design and pedagogical use of such spaces. Moreover, the voices reflected in this research will specifically include those of low socio-economic status (Low SES) students who are the least likely to be heard on issues that directly affect their educational outcomes (Thomson, 2004; Vibert & Shields, 2003).

The research questions being asked in this project are:

- How do children's images depict their perceptions of an ideal school?
- How do they agree and differ?
- What factors appear to be associated with agreement and differences?
- What implications are there for the design and use of educational spaces?

Notwithstanding the project's title, the term 'educational spaces' has been used in the research information supplied to participating schools to avoid restrictive notions of what the concept of 'school' means. This is to encourage thinking about real or virtual space in which teaching and learning may occur or, as Ferguson and Seddon (2007) have referred to it, "the shifting imagery of education" that includes red brick schools and dispersed learning networks.

The anticipated outcome will be a range of student views to increase understanding of children's desires and expectations in relation to learning environments. The results of the analysis will be published to better inform teachers and education authorities of the educational aspirations of young people. The findings will contribute to teachers' and

education authorities' considerations of educational space planning and use and design within changing contexts. Analysis will be fed back to teachers of students who have submitted entries to inform their own pedagogical practice.

This proposal was partly inspired by *"The School I'd Like"* (Burke & Grosvenor, 2003), which reported on a competition run in the UK that attracted a wealth of entries depicting the educational environment from the perspective of the children. In the UK study, school students of all age ranges were invited to contribute written and visual entries, with equal weight given to both data sets. The current proposal has taken into account the processes of that study but differs in giving weight to the visual data, being restricted to a small age range of school students (Years 5 and 6), and being non-competitive. The study also builds on processes used in students-as-researchers projects being carried out by the author in which visual narrative has been successfully employed as a research method to elicit young people's views on issues of school engagement.

Student voice and participation in school review and development have been extended through image based research (Carrington, 2007; Carrington, Allen & Osmolowski, 2007), contributing to change and progress in schools. Image based research is used to "set out to find other possibilities of looking into the 'inner world' of school from the pupils' perspective" (Schratz & Steiner-Löffler, 1998, p.236). Such images have been called 'a rich source of qualitative data' (Walker, 2008, p. 100). Visually-based data gathering has, then, become accepted as a valid method of enabling student voice in school improvement (Barraza, 1999; Buldu, 2006; Carrington, 2007; Schratz & Steiner-Loffler, 1998; Shratz-Hadwich, Walker & Egg, 2004) and can be developmentally more appropriate where students find difficulty expressing themselves through language.

A dedicated website, displaying the artwork and text with the initial analysis, will be made available only to the participants in the first instance. This will allow them to validate or challenge the analysis of their work by emailing their comments to the researcher. The website will then be adapted and made publicly accessible to disseminate the findings and exhibit the submissions. The site will include a blog so that visitors will have the opportunity to comment.

Process

Grade 5/6 (10-11 year-old) students in a range of primary schools in a variety of areas of Queensland have been invited to submit drawings and text to the project. To date, 12 schools, including State and private, special and faith-based, have submitted entries from around 250 students. To ensure the school sample reflects a representative geographical and socio-economic and student population spread, education authorities were requested to support the project. The regions of the State targeted range from inner-urban to rural-remote and include the northern coastal strip.

Following agreement to participate, schools nominate coordinating teachers who are then sent further details, consent forms for the school, the students and their parents, and an optional lesson plan. Teachers and students are advised the drawings can be about any aspect of 'learning spaces' such as classrooms, school grounds and buildings, idealised places to learn, or completely imaginative places. The project is deliberately broad-focused in its instruction to the children to reduce the possibility of influencing and restricting their ideas about what a school should be (e.g., a building containing classrooms) and so that they can allow their

imaginations to roam across all possibilities (e.g., no school at all, virtual school, school-on-wheels, etc.). The stimulus questions are:

What does the idea of 'school' mean to you?
How, when and where do you learn best?
Do schools need to have classrooms, buildings, etc? Why?
What things help you to learn?
If you could choose to do school lessons anywhere, where would you choose?
If you could design a school, where would it be? What shapes would you use?
What special areas would you include?

The children are requested to produce their work on A4 paper to enable scanning to the website. Drawings can be in black and white or colour, and can be annotated to help explain any aspect. Also, the students are asked to write up to 200 words to supplement the visual product – e.g., to say what is ideal about their imagined learning environment, or to further explain the drawing and why they have chosen particular shapes, colours, etc. Although well-developed drawing skills could enhance the visual imagery, ability to draw in a representational fashion is not necessary for this project. The supplementation of the images with written text or annotation should help to ensure that the children's meanings are made clear.

Theoretical background

The theoretical framework for this study is grounded primarily in the work of Greene (1995) and Wright-Mills (2001), both of whom have cited the deployment of critical and empathic imagination in addressing education reform. Support for image-based research is drawn in the main from Schratz and Steiner-Löffler (1998) while student participation in school improvement is framed by the extensive work of Rudduck and Flutter (2004).

Much of the literature relating to visual representation concerns psychological analysis and therapy through art and is, therefore, not directly relevant to this sociological study. Further, there is a range of literature that focuses on 'photovoice' and other visual techniques rather than drawing and is thus not directly relevant to this study. The literature base for this project is, however, being constantly expanded and includes a range of international studies in which children's drawing has contributed to school improvement. See, for example, Labitsi, 2007 (Greece); Lodge, 2005 (UK); Pehlivan, 2008 (Turkey); Yuen, 2004 (USA).

Why drawing?

Horn (1998) suggests we now live in a 'visual culture" (p. 19) but, in order to be considered a language, visual and text elements must be integrated. Barraza (1999), however, states that "children's drawings are useful tools in providing valuable information for the assessment of children's environmental perceptions" (p. 49) while Haney, Russell and Bebell (2004) suggest that drawings have 'unusual power to document and change the educational ecology of classrooms and schools" (p. 242). Drawings, then, are the primary data source being used in this project to re-imagine school from a student perspective (Schratz & Steiner-Löffler, 1998). The accompanying texts will be used to provide elaboration and clarification of the visual work.

The choice of Year 5/6 is based on Piaget's concrete operational stage during which children begin to think logically and become more empathically aware, but where practical aids are

mostly essential. Barazza (1999) employs Luquet's classification of drawing development which, she claims, influenced the work of Piaget, for whom drawing has a significant role in promoting cognitive development. Luquet's 5th stage is "Visual realism" (8 years and older) during which children begin to draw from a particular viewpoint, use proportions and work out relationships accordingly, showing parallel intellectual development and drawing development. A 1976 study, The Structure of Imagery (Dean, 1976) confirmed Piaget's theory of imagery development in relation to spatial relations in children's drawing. Later studies have shown that, by ages 7-9, "children have developed a graphic language … including specific symbols and rules of spatial organisation" (Walker, 2008, p. 97) and at around age 9-11 they strive for greater accuracy (see also Barazza, 1999).

Why imagination?

Imagination is the "hard-working core of children's thinking" (Egan, 2003). It is this core that the project explores through the drawings and written work of the participants. In emphasising imaginative work, the research is of the kind that Halpin (2007) says " is especially helpful in those teacher education contexts where consideration is being given to the redesign of previously taken-for-granted environments for student learning which are deemed to constitute inadequate sites for progressive educational practice" (p. 247). The imaginative process, it is asserted, will encourage students to think beyond the limits of their normal school surrounds, and to develop creative solutions to the use of educational space.

Fine (1994) argued that educational research should "challenge what is, incite what could be, and help imagine a world that is not yet imagined" (p. 30). In this way, the processes of this research fit well with what Greene (1995) called "social imagination: the capacity to invent visions of what should be and what might be in our deficient society, on the streets where we live, in our schools" (p. 5). Such imaginative invention may be considered a form of "utopian thinking", a concept explored by Giddens (2001) who suggested sociologists should take "an imaginative leap beyond the familiar" (p. 1) in order to gain distance from "the here and now" (p. 1), to assess how societies have changed, and to consider potential future transformations. Giddens did, however, caution the use of *disciplined* imagination as "the creative ability of the imagination has to be restrained by conceptual and empirical rigour" (p. 1). In reviewing Giddens' theories, Halpin (1999) added that education policies can benefit through applying the "utopian imagination" and developing radical and previously untried ideas, "putting to one side our assumptions about the existing order of things, and the current supposedly limits of change" (p. 347).

How will the data be analysed?

While visually-based data gathering has become accepted as a valid method of enabling student voice in school improvement (Barraza, 1999; Buldu, 2006; Carrington, 2007; Schratz & Steiner-Loffler, 1998; Shratz-Hadwich, Walker & Egg, 2004), analysis of visual material to date has been developed mostly in the field of psychology and art therapy (e.g., Silver, 2001). Unique analytical instruments are, then, being developed for this study. These will consider three levels of analysis: visual and expressed content; imagination; and visual language. Coding, using NVivo analysis software will enable the identification of emergent themes from both drawn and written work.

Although well-developed drawing skills could enhance the visual imagery, ability to draw in a representational fashion is not necessary for this project. The supplementation of the images with written text or annotation helps to ensure that the children's meanings are made clear.

Coding by content
Each drawing and accompanying text will firstly be coded according to themes developed from an analysis of visual content. This will include the drawn and imagined environment, types of buildings and grounds, environmental considerations, special features, etc. (see Appendix 1). This instrument will be applied in the first instance to code features of the contributions for comparison on a basis other than artistic ability. The analysis will also consider similarities which will be coded to determine emergent themes in relation to the various aspects of school such as physical and organisational properties.

Coding by imagination
The typology of imaginations developed by the author (Bland, 2004) will be used to develop a tool for analysis of the visual data. The typology was developed through the researcher's PhD studies and is based on the work of a range of theorists who have examined imagination in sociological contexts (see Appendix 2). From the four major categories (fantasy, creative, critical and empathic) and further sub-divisions, an analytical tool will be developed for this project. This will enable the analysis to be based on dimensions such as empathy and criticality as well as creativity.

Coding by visual language
A third assessment instrument will be developed that will be used to analyse the submitted visual work as a graphic language, enabling coding of graphic elements and, subsequently, themes identified and developed. This is the most challenging aspect of this research project as, while a number of proposals have been put forward, finding a method that allows children's visual material to be coded as a language has been elusive.

Recent research by Lodge (2007) demonstrates that images employ a grammar to convey shared meaning and, as such, can be considered visual semiology. Lodge analyses children's drawings through "the metaphors, choices, positioning, the compositional effects, repetitions, assumptions and clichés employed to convey a message" (p. 147). Her work will inform the analysis of the current project. Further, Riley (2004) provides a very useful social semiotic matrix of drawing emphasising the positionality of both producers and viewers whose attitudes and points of view relating to drawings are influenced by social relations. Drawing on the work of Kres and van Leeuwen (1996), Callow (2006) demonstrates a linking of linguistics and semiotics that underpins a visual grammar that sis being used by some educators in classroom contexts.

How will the data be used?

The resulting analyses from these approaches will be combined in quantitative and qualitative re-analysis and synthesis. Participants and their schools will be de-identified in reports resulting from this research, but will be coded according to student age, gender and local data (SES demographic, geographic location, size) so that comparisons between school types can be made.

Website
All work will be put on public exhibition through a purpose-developed website and a static exhibition at Kelvin Grove. The student participants will have the opportunity through the website to challenge statements made by the research team that they believe misinterpret their individual and/or collective contributions, providing additional authenticity to the research findings.

Further, visitors to the site and the static exhibition will be asked to leave written comments about the works that are meaningful to them. The visitor comments will also be analysed to add an unbiased response to the ideas put forward by the participants. All contributions will be screened by the CIs prior to their addition to the site to remove any detrimental comments.

The website will become the research report with the analysis included when complete, and will then be continually developed following the conclusion of the research. The schools attended by the participants will not be identified in reports resulting from this research, but will be coded according to local data (SES demographic, geographic location, size) so that comparisons between school types can be made.

Preliminary findings and discussion

To date, 12 schools have elected to participate in the research with 126 submissions received, 73 of these from female students. This total number of entries so far is lower than anticipated, primarily to schools needing to deal with the requirements of national testing at that the time the project was initiated. There were also unforeseen factors such as school closures due to ‘swine flu’ and a teacher strike. As this project is, however, a pilot for a wider research program, the numbers are satisfactory to be able to draw some inferences and the learnings regarding project timing are most valuable.

Results by imagination
The range of ideas emanating from the children’s imaginations is vast; a flying carriage drawn by a dragon, a hot air balloon, and inside a video game are some of the more fantastic sites that have been conceived. One student imagined an entire town as the school with this town being in a snow-covered country where students travel on skis. Interestingly, this participant’s school was in a tropical area of the State and it is unlikely she would have experienced snow at any time. These are some of the more extreme examples of fantastic environments. While there was a good number who suggested beaches and rain forests, even tree houses, as school sites, most participants restricted themselves to more mundane environments include individual classrooms and fairly traditional styles of building, while one Year 5 student felt it would be ideal for school to be his own bedroom.

There have been many proposals that incorporate animal care and one that suggested “a school for vegetarians or for people who want to learn what it is about to be a vegetarian” (15/SCH/03), but few examples of truly empathic imagination to date. Among those that did consider the needs of others from an empathic point of view were a number who suggested protecting younger children through the provision of segregated areas and two who considered the needs of school office staff. One Year 6 male proposed a fruit and vegetable garden “for kids that don’t have lunch” (15/SCH/10).

In relation to critical imagination, there have been proposals to reduce the school day and the school week and some instances of indirect criticism of teachers who yell and who are boring, but no student has directly challenged the authority of schools or the need to attend, although one did suggest that schooling should be for teenagers only.

Results by content

There are frequent instances of environmental awareness, with solar power and the use of direct sunlight being suggested by many participants. Trees and plants, particularly food-producing varieties, occur regularly in the drawn and written work, many linked to curriculum as well as healthy eating. Water in the form of waterfalls (for comforting sounds), duck ponds, and creeks have been featured by many participants while others prefer being on a beach, on the ocean, or even under the sea. Animals also feature strongly, including petting zoos, so that students can learn animal welfare. Colour is a vital component of the school environment; rainbows are often mentioned and drawn as essential features of buildings.

School is seen in general as a social environment where friends gather to learn, play and have fun, with the main emphasis on fun and well-being. This is the most frequent message being presented whether in relation to the school environment, the primary features and facilities, or pedagogical aspects. The message of fun and playing together continued into proposals relating to class work. Not surprisingly, perhaps, there was a strong emphasis on sport, particularly among male participants, and on creativity.

It should be emphasised that these are very early results and a full analysis has yet to be completed. The visual language component of the analysis has not yet been attempted and will be a later development of the project following the completion of the imagination and content analyses and the establishment of the website.

Overwhelmingly, the students' work emphasises that learning should be fun and that learning environments should be eco-friendly and imaginative. The ideal schools featured facilities such as onsite theme parks, roller-coasters to deliver students to and from classrooms, games arcades, water slides, fountains and pools. They also emphasised colour and excitement. These findings and features closely parallel those of a 2004 US French and Hill (2004) study in which the authors concluded that the work displayed a 'desire to integrate colour, light, and interesting spaces into the learning environment" (p. 37). The writers suggested that the more imaginative elements, such as theme parks, while not feasible, "can be integrated into the design through the use of murals and other appropriate design elements". Egan (2005) takes a pedagogical approach, suggesting that where removing students from what may be emotionally sterile classrooms is not feasible, their imaginations can be ignited by disrupting the expected routines.

Both studies have also shown a desire among children to learn in cooperative and friendly social environments. A good number of students have specifically mentioned this in relation to ways of learning, showing classroom arrangements that support group work. As French and Hill stated, "these themes show that students want their schools to be special places that capture their interest and inspire their imaginations." (p. 38)

Researcher's positioning

One potential problem in analysing visual material is interpretation from the standpoint of the viewer whose age, background, social relations, and culture, may not only differ from those

of the artist but may lead to incorrect assumptions and interpretations. For this reason, the current project requests participants' written explanations and clarifications accompanying their drawings. One example of this from the current project is the work of a Year 5 female student from a faith-based school who drew a girls' school. The researcher's initial assumption was that gender segregation was an essential aspect of the student's ideal learning environment, a view supported by the religious culture of the participating school. The student, however, in her written text, added the statement: 'I chose a girl school because I'm a girl and it's easy for me to draw a girl.' (50BC06).

Teacher effects

It is at times obvious that the supervising teacher has given advice or ideas to the participants about ways to proceed with the work, resulting in a 'house style'. For example, one school's submissions mostly fit the category of 'fantasy', providing some of the most extreme imaginative concepts, while another school's submissions are mostly floor plans. In the written texts, most of one school's participants used the suggested questions as sub-headings. A further contributing teacher effect is that some of the supervising teachers are generalist primary teachers while others (mainly in private schools) are specialist art teachers. Some teacher effects may be more subtle and harder to detect, so for the purposes of this study, identification of such factors will be through repetition of ideas and styles in the children's work that are unlikely to be due to sharing among friends.

Conclusion

This paper represents a report on the progress of the 'Imagine a School...' project. While there is still much to do in relation to the assessment of the drawings and the development of the assessment instruments, themes are beginning to emerge. In particular, the idea that school and learning should be imaginative, creative and fun.

The methodology appears to provide a means for the Year 5 and 6 students to express their imaginations in ways that are both fantastic and practical, with ideas developing regarding learning environments and pedagogy that can contribute to school design. As Egan (2008) suggested, schools of the future should embody exuberance and architectural wit in their buildings. The imaginations of the project participants are an exciting source of ideas for school designers to draw from.

The next stage of the pilot project, following the completion of the analysis is to develop the website which will firstly give the participants the opportunity to comment on the researcher's analysis, and will then allow the public to make comment. Project completion is expected to be by the end of 2009.

References

Barraza, L. (1999). Children's drawings about the environment. *Environmental Education Research, 5*(1), 49-67.

Bland, D. (2004). *The role of critical imagination in research with young people.* Paper presented to the Annual Australian Association for Research in Education, Melbourne, Victoria, December, 2004.

Bland, D. (2006). *Researching educational disadvantage: Using participatory research to engage marginalised students with education*. Unpublished PhD thesis. Brisbane: QUT.

Buldu, M. (2006). Young Children's Perceptions of Scientists: A Preliminary Study. *Educational Research, 48*(1), 121-132.

Burke, C., & Grosvenor, I. (2003). *The school I'd like: Children and young people's reflections on an education for the 21st century.* London: RoutledgeFalmer.

Carrington, S. (2007). Real policy, real change. Transforming secondary school cultures through image based research. In J. Moss (Ed.) *Researching Education: Visually – Digitally – Spatially.* Sense Publishers: Rotterdam, The Netherlands.

Carrington, S., Allen, K., & Osmolowski, D. (2007).Visual narrative: A technique to enhance secondary students' contribution to the development of inclusive, socially just school environments. *JORSEN ,7* (1), p.8-15.

Dean, A. (1976). The Structure of Imagery. *Child Development, 47*, 949-958

Department of Education and Early Childhood Development, Victoria (2008). *Victorian School Design.* Accessed 13 February 2009 from http://www.eduweb.vic.gov.au/edulibrary/public/propman/facility/vsd-introduction.pdf

Egan, K. (2003). Start with what the student knows or with what the student can imagine? *Phi Delta Kappan. 84*(6), 443.

Egan, K. (2005) *An Imaginative Approach to Teaching.* San Francisco, CA: Jossey-Bass.

Egan, K. (2008). *The future of education: Re-imagining our schools from the ground up.* New Haven: Yale University Press.

Ferguson, K., & Seddon, T. (2007). Decentred education: Suggestions for framing a socio-spatial research agenda. *Critical Studies in Education,* 48(1), 111-129.

Fielding, M. (2001). Students as radical agents of change. *Journal of Educational Change, 2*(2), 123-141.

Fine, M. (1994). Dis-stance and other stances: Negotiations of power inside feminist research. In A. Gitlin (Ed.), *Power and method: Political activism and educational research* (pp. 13-35). New York: Routledge.

French, J., & Hill, D. (2004). The kid-friendly school. *American School Board Journal*, February 2004, 36-38.

Giddens, A. (2001). What is sociology? In A. Giddens (Ed.), *Sociology: Introductory readings* (Revised ed., pp. 1). Cambridge, UK: Polity Press.

Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco: Jossey-Bass.

Grundy, S. (1996). Towards empowering leadership: The importance of imagining. In O. Zuber-Skerritt (Ed.), *New directions in action research* (pp. 106-120). London: Falmer Press.

Halpin, D. (1998). *Democracy, inclusive schooling and the politics of education.* Paper presented at the British Educational Research Association Annual Conference, 1998, Queen's University, Belfast.

Halpin, D. (2003). *Hope and education: The role of the Utopian imagination*. London: Routledge.

Halpin, D. (2007). Utopian Spaces of ‘‘Robust Hope’’: The architecture and nature of progressive learning environments. *Asia-Pacific Journal of Teacher Education,* 35(3), 243–255.

Haney, W., Russell, M., & Bebell, D. (2004). Drawing on education: Using drawings to document and support change. *Harvard Educational Review, 74*(3), 241-271.

Horn, R. (1998). *Visual language: Global communication for the 21st century.* Bainbridge Island, Washington: MacroVU.

Kearney, R. (1988). *The wake of imagination: Toward a postmodern culture*. Minneapolis, MN: University of Minnesota Press.

Kress, G., & van Leeuwen, T. (1996). *Reading images: The grammar of visual design.* London: Routledge..

Labitsi, V. (2007). ‘Climbing to reach the sunset’: An inquiry into the representation of narrative structures in Greek children’s drawings. *International Journal of Education through Art*, 3(3), 185-193.

Lodge, C. (2005). Regarding learning: Children’s drawings of learning in the classroom. *Learning Environments Research*, 10, 145-156.

Mary Featherstone Design (2006). *The inside-out project.* Accessed 20 August, 2009 from http://www.featherston.com.au/inside-out.html

Maxcy, S. (1991). *Educational leadership: A critical pragmatic perspective*. New York: Bergin & Garvey.

Pehlivan, H. (2008). Mythological Drawings from Turkish Elementary School Children. *Elementary Education Online*, 7(1), 150-156.

Riley, H. (2004). Perceptual modes, semiotic codes, social mores: A contribution towards a social semiotics of drawing. *Visual Communication, 3*, 294-315.

Rudduck, J., & Flutter, J. (2004). *How to improve your school.* London: Continuum.

Sack-Min, J. (2008). Teens help architects redesign schools. *American School Board Journal*, January 2008, accessed 21 September 2008, from http://web.ebscohost.com.ezp01.library.qut.edu.au/ehost/pdf?vid=5&hid=106&sid=6ffb5675-1536-4ede-983e-b3507273a6ad%40sessionmgr9

School District of Philadelphia (2004). *The school of the future*. Accessed 13 February 2009 from http://www.phila.k12.pa.us/offices/sof/concept.html

Schratz, M. & Steiner-Löffler, U. (1998). Pupils using photographs in school self-evaluation. In Prosser, J. (Ed) *Image-based research. A sourcebook for qualitative researchers*. Falmer Press: London p.235-251.

Shratz-Hadwich, B., Walker, R., & Egg, P. (2004). *Photo evaluation: A participatory ethnographic research and evaluation tool in child care and education.* Paper presented at the Australian Association for Research in Education annual conference, Nov 28-Dec 2, 2004, Melbourne.

Silver, R. (2001). *Art as language: Access to thoughts and feelings through stimulus drawings*. Philadelphia: Brunner-Routledge.

Thomson, P. (2004). *Unpopular voices: Listening to pupils "at risk"*. Paper delivered to the International Networking for Educational Transformation on-line conference on student voice, 20-26 September, 2004. Retrieved 25 September, 2004, from http://www.cybertext.net.au/inet/focus_papers/f5_14.htm

Vibert, A., & Shields, C. (2003). Approaches to student engagement: Does ideology matter? *McGill Journal of Education*, 38(2), 221-239.

Walker, K. (2008). Children and their purple crayons: understanding their worlds through their drawings. *Childhood Education*; Winter 2007/2008, 84-102.

Woolner, P., Hall, E., Higgins, S., McCaughey, C., & Wall, K. (2007). A sound foundation? What we know about the impact of environments on learning and the implications for building schools of the future. *Oxford Review of Education, 33*(1), 47-70.

Woolner, P., Hall, E., Wall, K., & Dennison, D. (1007). Getting together to improve the school environment: User consultation, participatory design and student voice. *Improving Schools, 10*(3), 223-248.

Wright Mills, C. (2001). The sociological imagination and the promise of sociology. In A. Giddens (Ed.), *Sociology: Introductory readings* (Revised ed., pp. 7-9). Cambridge, UK: Polity Press.

Yuen, F. (2004). "It was fun. . .I liked drawing my thoughts": Using drawings as a part of the focus group process with children. *Journal of Leisure Research*, 36(4), 461-482.

Appendix 1: Coding by content.

Student - content analysis (text)

Student name: **School:** **Year level:** **Gender:**

Reference No.

Priorities (first 3 items)				**Notes**
1				
2				
3				
SETTING	**FEATURE**	**Sub-features**	**USE/PURPOSE**	
Environmental considerations				
External environment				
	location			
	grounds	trees		
		water		
		animals		
	Colour/s			
	Travel (to/from)			
	Technology			
Internal environment				
	Garden/s			
	Play area/s			
	Study area/s			
	Colour/s			
	sounds			

Student - content analysis (visual)

Student name: **School:** **Year level:** **Gender:**

Reference No.

Prominence (3 items)				**Notes**
1				
2				
3				
SETTING	**FEATURE**	**Sub-features**	**USE/PURPOSE**	
Environmental considerations	solar			
External environment				
	location			
	grounds	trees		
		water		
		animals		
	Colour/s			
	Travel (to/from)			
	Technology			
Internal environment				
	Garden/s			
	Play area/s			
	Study area/s			
	Colour/s			
	sounds			

Appendix 2: Typology of uses of imagination.
This typology was an original contribution to the literature on imagination developed through the author's PhD studies (Bland, 2006).

A typology imaginations

Type	sub-type	attributes	theorist
empathic		· questioning from the point-of-view of marginalised others · voices of the marginalised · empowering	Grundy (1996) Greene (1995) Wright-Mills (2001)
	ethical	· inalienable right of the other to be recognised and heard	Kearney (1988)
critical	reflective	· unsettling · disruptive · challenging	Fine (1994)
	sociological	· investigative · hermeneutic	Wright-Mills (2001)
	disciplined	· restrained · rigorous	Giddens (2001)
	utopian	· trying new ideas · radical	Giddens (2001) Halpin (1998)
	critically-pragmatic	· tempered by reflection	Maxcy (1991)
creative	poetic	· inventive · increased empathy	Kearney (1988)
	pragmatic	· problem-solving	Maxcy (1991)
	grounded	· theoretical and practical	Fielding (2001)
fantasy	· daydreams · reverie · déjà vu · remembrance	· unproductive	Maxcy (1991)